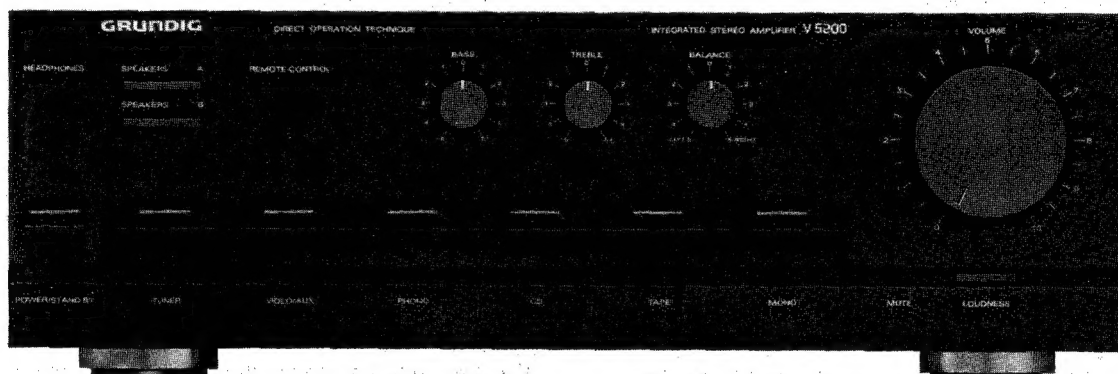


V 5200



D

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GB

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Bei Eingriffen Schutzmaßnahmen für MOS-Bauteile beachten!

Das Gerät muß auch nach der Reparatur den Sicherheitsbestimmungen nach DIN/IEC 65 VDE 0860 entsprechen.

N.B. When carrying out repairs, observe MOS precautions!

After the unit has been repaired, it should still meet the DIN/IEC 65 VDE 0860 safety requirements.

Ausbauhinweise

Gehäuseoberteil

- 5 Schrauben **a** herausschrauben.
- Gehäuseoberteil abnehmen.

Front

- Steckverbindungen zur NF-Platte (P401) lösen.
- 5 Schrauben **b** herausschrauben.
- 2 Rastnasen **c** ausrasten.
- Front abnehmen.

Prozessorplatte (PU01)

- Frontblende abnehmen.
- Schraube **d** herausschrauben.
- Prozessorplatte abziehen.

Bedienplatte (PF01) und Stand by-LED-Platte (PU51)

- Prozessorplatte ausbauen.
- 3 Muttern **e** abschrauben.
- Mutter **f** abschrauben.
- 4 Schrauben **g** herausschrauben.
- Rastnasen ausrasten.
- Die beiden Platten herausnehmen.

Lautsprecherwahlplatte (PW01)

- Frontblende abnehmen.
- 2 Schrauben **h** herausschrauben.
- Lautsprecherwahlplatte herausnehmen.

Kopfhörerbuchsenplatte (PW51)

- Frontblende abnehmen.
- Schraube **i** herausschrauben.
- Kopfhörerbuchsenplatte herausnehmen.

NF-Platte (P401)

Für Arbeiten an der NF-Platte kann der Boden geöffnet werden.

Ausbau der NF-Platte:

- Steckverbindungen lösen.
- 4 Schrauben **k** herausschrauben.
- 6 Schrauben **l** herausschrauben.
- NF-Platte herausschrauben.

Trafo (L001)

- Verbindungen lösen.
- 4 Schrauben **m** herausschrauben.
- Trafo herausnehmen.

Netzteilplatte (PS01)

- Verbindungen lösen.
- Schraube **n** herausschrauben.
- Netzteilplatte herausnehmen.

Disassembly Instructions

Cabinet Top

- Unscrew 5 screws **a**.
- Remove the top of the cabinet.

Front

- Disconnect the plug-in connections to the AF board (P401).
- Unscrew 5 screws **b**.
- Disengage the two latches **c**.
- Remove the front.

Processor Board (PU01)

- Remove the front.
- Unscrew screw **d**.
- Pull off the Processor board.

Control Circuit Board (PF01) and Stand by LED Board (PU51)

- Remove the Processor board.
- Unscrew the three nuts **e**.
- Unscrew the hexagon nut **f**.
- Unscrew 4 screws **g**.
- Disengage the latches.
- Remove both boards.

Speaker Selection Circuit Board (PW01)

- Remove the front.
- Unscrew two screws **h**.
- Remove the speaker selection circuit board.

Headphone Socket Board (PW51)

- Remove the front.
- Unscrew screw **i**.
- Remove the headphone socket board.

AF Board (P401)

For carrying out repair works on the main circuit board the bottom plate can be removed.

Removing of the AF Board:

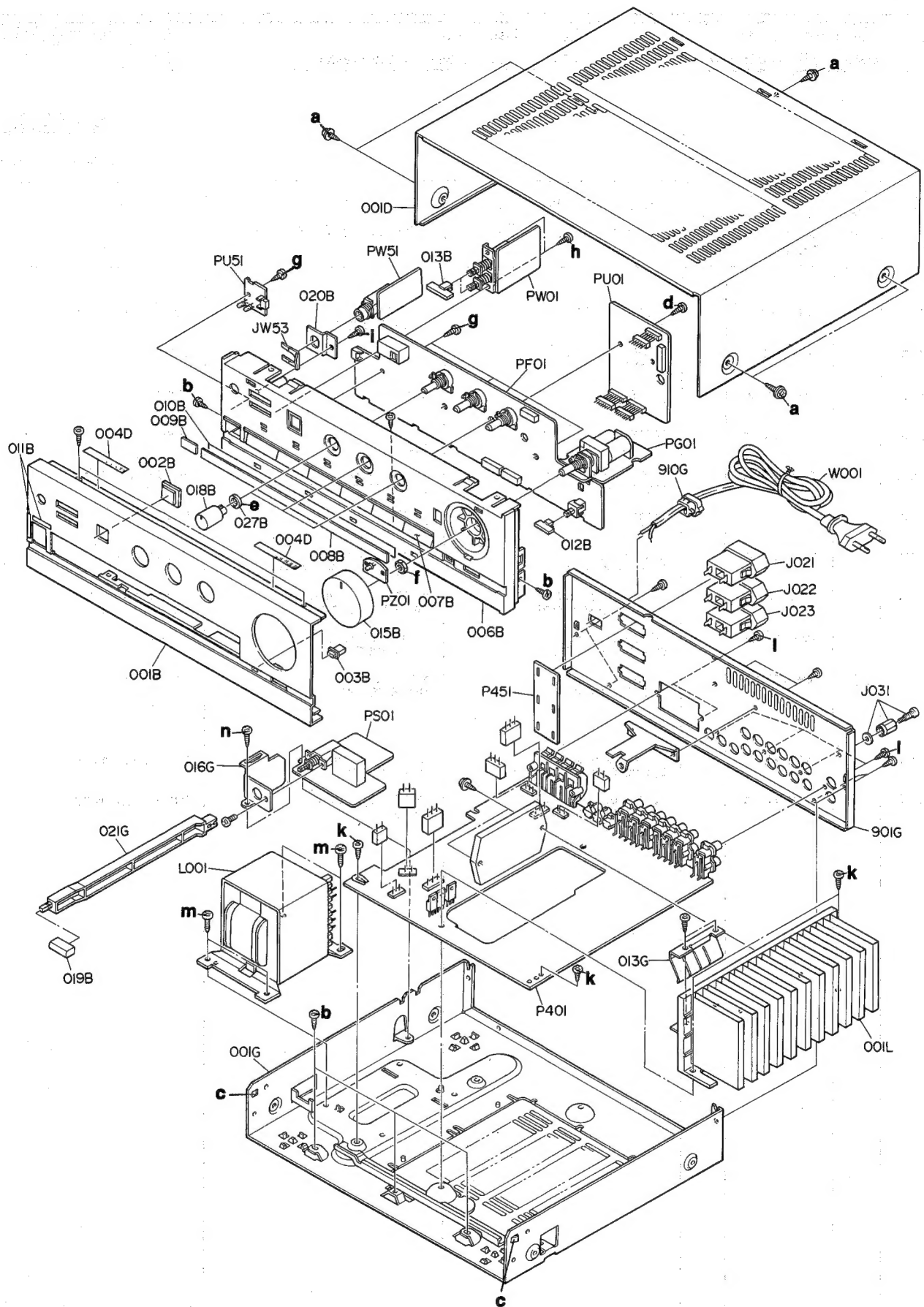
- Disconnect the plug-in connections.
- Unscrew 4 screws **k**.
- Unscrew 6 screws **l**.
- Remove the AF board.

Transformer (L001)

- Disconnect the connections.
- Unscrew 4 screws **m**.
- Remove the transformer.

Mains Board (PS01)

- Disconnect the connections.
- Unscrew screw **n**.
- Remove the mains board.



GRUNDIG ERSATZTEILLISTE

HIFI 

(GB)

List of Spare- Parts

(I)

Lista ricambi

(F)

Liste de pièces détachées


(E)

Lista de piezas de repuestos









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








V 5200

SACH-NR. 75987-509.00


Pos. Nr. Pos. No.	Abb Nr. Fig. No.	Sachnummer Part.No. Références No. ordine	Anz.	BEZEICHNUNG (D) DESIGNATION (F)	DESCRIPTION (GB) DENOMINACION (E)	(I)
001B.000		75987-509.33		FRONTPLATTE KPL. PANNEAU AVANT	FRONT PANEL PLACA FRONTAL	PIASTRA FRONTALE
007B.000		75987-509.36		TASTE TOUCHE	KEY TECLA	TASTO
012B.000		75987-509.38		TASTE TOUCHE	KEY TECLA	TASTO
013B.000		75987-509.39		TASTE TOUCHE	KEY TECLA	TASTO
015B.000		75987-509.32		LAUTSTAERKEKNOPF KPL. VOLUME BOUTON	VOLUME KNOB BOTON DE VOLUMEN	VOLUME TASTO
018B.000		75987-509.31		KNOPF BOUTON	KNOB BOTON	PULSANTE
019B.000		75987-509.37		NETZTASTE TOUCHE SECTEUR	MAINS BUTTON; TECLA INTERRUPTOR RED	TASTO DI RETE
021G.000		75987-509.30		ZWISCHENSTUECK PIECE INTERMEDIAIRE	INTERMEDIATE PIECE PIEZA INTERMEDIA	PEZZO INTERMEDIO
ZK01		75987-509.21		FERNBEDIENUNG COMMANDE A DISTANCE	REPOTE CONTROL TELEMANDO	TELECOMANDE
W001		8290-991-003		NETZKABEL CABLE SECTEUR	MAINS LEAD CABLE DE RED	CAVO DI RETE
0999.997		72010-712.25		SERVICE MANUAL INSTRUCTIONS DE SERVICE	SERVICE MANUAL MANUAL DE SERVICIO	MANUALE DI SERVIZIO
0999.998		72010-710.80		BEDIENUNGSANLEITUNG MODE D'EMPLOI	INSTRUCTION MANUAL MANUAL DE MANEJO	ISTRUZIONI D'USO

ÄNDERUNGEN VORBEHALTEN - ALTERNATIONS RESERVED - CON RISERVA DI MODIFICHE - TOUS DROITS DE MODIFICATIONS RESERVES - CON RESERVA DE MODIFICACIONES

Pos. Nr. Pos. No.	Sachnummer Part number Références No. ordine	BEZEICHNUNG DESCRIPTION DENOMINAZIONE DESIGNATION DENOMINACION	(D) (GB) (I) (F) (E)
			
C 802 C 803	75987-509.60 75987-509.60	ELKO 6800UF/55V ELKO 6800UF/55V	
			
D 701 D 702 D 703 D 801 D 802 D 803 D 804 D 805 D 806 D 807 D 808 D 809 DF 01 DF 02 DG 01 DG 02 DP 01 DU 01 DU 02 DU 03 DU 04 DU 05 DU 06 DU 07 DU 08 DU 09 DU 10 DU 11 DU 12 DU 13 DU 14 DU 15 DU 51 DU 52 DZ 01	75986-200.82 75986-200.82 75986-200.82 75987-451.33 75986-200.82 75986-200.82 75986-200.82 75986-200.82 75986-200.82 75986-200.82 75986-200.82 75986-200.82 75987-428.78 75987-428.78 75986-200.82 75986-200.82 75986-200.82 75987-485.38 75987-428.78 75987-509.07 75987-509.07 75987-509.07 75987-509.07 75987-509.07 75987-509.07 75987-509.07 75987-509.07 75987-509.07 75987-509.07 75987-509.07 75987-509.07 75987-509.07 75987-509.06 75987-509.06 75987-509.07	DIODE DSF 10 C DIODE DSF 10 C DIODE DSF 10 C DIODE S 5 VB 20 DIODE DSF 10 C DIODE DSF 10 C DIODE DSF 10 C DIODE DSF 10 C DIODE DSF 10 C DIODE DSF 10 C DIODE DSF 10 C DIODE DSF 10 C DIODE 1 SS 176 DIODE 1 SS 176 DIODE DSF 10 C DIODE DSF 10 C DIODE DSF 10 C DIODE MTZJ 5.6 A DIODE 1 SS 176 LE DIODE LT 3 H 8 B LE DIODE LT 3 H 8 B LE DIODE LT 3 H 8 B LE DIODE LT 3 H 8 B LE DIODE LT 3 H 8 B LE DIODE LT 3 H 8 B LE DIODE LT 3 H 8 B LE DIODE LT 3 H 8 B LE DIODE LT 3 H 8 B LE DIODE LT 3 H 8 B LE DIODE LT 3 H 8 B LE DIODE LT 3 H 8 B LE DIODE LT 3 H 8 B LE DIODE LT 3 H 8 B LE DIODE LT 3 D 88 LE DIODE LT 3 D 88 LE DIODE LT 3 H 8 B	
			
FO 01	75987-509.47	QUARZ	
			
FP 01	8315-618-002 8315-619-003	FS.1,25 A/T T 1,6 A	
			
GP 01  GP 02 	75987-509.56 75987-509.56	KOND.0,01UF /20% KOND.0,01UF /20%	

Pos. Nr. Pos. No.	Sachnummer Part number Références No. ordine	BEZEICHNUNG DESCRIPTION DENOMINAZIONE DESIGNATION DENOMINACION	(D) (GB) (I) (F) (E)
			
L 001 	75987-509.22	TRAFO	
			
L 701 L 702	75987-451.49 75987-451.49	SPULE SPULE	
			
L 703 LP 01	75987-509.12 75987-509.11	RELAIS RELAIS	
			
Q 401 Q 701 Q 702 Q 703 Q 704 Q 751 Q 801  Q 802  Q 803  QF 01 QF 02 QF 03 QF 04 QF 05 QF 06 QG 01 QP 01 QS 01 QS 03 QS 04 QS 05 QU 01 QU 03 QU 04 QU 05 QU 06 QU 07 QU 08 QU 10 QU 11 QU 12 QU 13 QU 14 QU 15 QU 16 QU 17 QU 18 R 715  R 716  R 801  R 803  RF 33 RF 39 RF 40 RG 01	75986-200.77 75987-509.02 75987-465.77 75987-451.54 75987-465.77 75987-451.51 75987-509.05 75987-451.67 75987-509.04 75986-200.77 75986-200.77 75987-509.08 75987-509.08 75987-509.08 75987-509.08 75987-509.03 75987-465.77 8305-262-821 75987-509.01 75987-300.75 75987-429.00 75987-509.09 75987-509.58 75987-509.58 75987-429.00 75987-429.00 75987-429.00 75987-429.00 75987-509.10 75987-509.58 75987-509.58 75987-509.58 75987-509.58 75987-509.58 75987-509.58 75987-509.58 75987-509.58 8766-701-049 8766-701-049 75987-509.14 8766-701-025 75987-509.15 75987-509.16 75987-509.16 75987-509.17	IC NJM 4558 DD IC STK 4204 V TRANS.2 SC 2240 GR TRANS.2 SA 970 TRANS.2 SC 2240 GR IC NJM 2041 DD IC NJM 7815 FA IC NJM 79 M 15 A IC NJM 7806 FA IC NJM 4558 DD IC NJM 4558 DD TRANS.2 SC 2878 (A) TRANS.2 SC 2878 (A) TRANS.2 SC 2878 (A) TRANS.2 SC 2878 (A) IC LB 1630 TRANS.2 SC 2240 GR IC LC 7821 SANYO IC LC 4966 TRANS.2 SA 1048 GR TRANS.2 SC 2458 GR MICROPROCESSOR TRANS.DTA 114 ES TRANS.DTA 114 ES TRANS.2 SC 2458 GR TRANS.2 SC 2458 GR TRANS.2 SC 2458 GR FOTOTRANS. TRANS.DTA 114 ES TRANS.DTA 114 ES TRANS.DTA 114 ES TRANS.DTA 114 ES TRANS.DTA 114 ES TRANS.DTA 114 ES TRANS.DTA 114 ES TRANS.DTA 114 ES KSW SI A 100 OHM 5% -GA KSW SI A 100 OHM 5% -GA SICHERUNGSWIDERSTAND KSW SI A 10 OHM 5% -GA ESTR.100 KOHM ESTR.100 KOHM(B) ESTR.100 KOHM(B) ESTR.50 KOHM(B)	

Sicherheitsvorschriften Safety requirements

Pos. Nr. Pos. No.	Sachnummer Part number Références No. ordine	BEZEICHNUNG DESCRIPTION DENOMINAZIONE DESIGNATION DENOMINACION	(D) (GB) (I) (F) (E)
 SG 01 SP 01 SU 01 SU 02 SU 03 SU 04 SU 05 SU 06 SW 01	75987-509.20 75987-509.18 75987-509.19 75987-509.19 75987-509.19 75987-509.19 75987-509.19 75987-509.19 75987-509.21	SCHALTER SCHALTER SCHALTER SCHALTER SCHALTER SCHALTER SCHALTER SCHALTER SCHALTER	

Sicherheitsvorschriften/Safety requirements / Prescrizioni de sicurezza / Prescriptions de sécurité / Prescripciones de seguridad



Achtung: Bei Eingriffen ins Gerät sind die Sicherheitsvorschriften nach VDE 701 (reparaturbezogen) bzw. VDE 0860 / IEC 65 (gerätebezogen) zu beachten!



Bauteile nach IEC- bzw. VDE-Richtlinien! Im Ersatzfall nur Teile mit gleicher Spezifikation verwenden!

MOS - Vorschriften beim Umgang mit MOS - Bauteilen beachten!



Attention: Please observe the applicable safety requirements according to VDE 701 (concerning repairs) and VDE 0860 / IEC 65 (concerning type of product)!



Components to IEC or VDE guidelines! Only use components with the same specifications for replacement!

Observe **MOS** components handling instructions when servicing!



Attenzione: Osservare le corrispondenti prescrizioni di sicurezza VDE 701 (concernente servizio) e VDE 0860 / IEC 65 (concernente il tipo di prodotto)!



Componenti secondo le norme VDE risp. te IEC! In caso di sostituzione impiegare solo componenti con le stesse caratteristiche.

Osservare le relative prescrizioni durante, lavori con componenti **MOS**!



Attention: Priere d'observer les prescriptions de sécurité VDE 701 (concernant les reparations) et VDE 0860 / IEC 65 (concernant le type de produit)!



Composants répondant aux normes VDE ou IEC. Les remplacer uniquement par des composants ayant les mêmes spécifications.

Lors de la manipulation des circuits **MOS**, respecter les prescriptions **MOS**!



Atención: Recomendamos las normas de seguridad VDE u otras normas equivalentes, por ejemplo: VDE 701 para reparaciones, VDE 0860 / IEC 65 para aparatos!



Componentes que cumplen las normas VDE/IEC. En caso de sustitución, emplear componentes con idénticas especificaciones!

Durante la reparacion observar las normas sobre componentes **MOS**!



U.S. &
Canada

Attention: This set can only be operated from AC mains of 120 V/60 Hz. Also observe the information given on the rear of the set.



CAUTION: For continued protection against risk of fire replace only with same type fuses!

CAUTION: To reduce the risk of electric shock, do not remove cover (or back), no user-serviceable parts inside, refer servicing to qualified service personnel.




Components to safety guidelines (IEC/U.L.)! Only use components with the same specifications for replacement!

Observe by checking leakage-current or resistance measurement that the exposed parts are acceptably insulated from the supply circuit.

Observe **MOS** components handling instructions when servicing!

(D) Sicherheitsbestimmungen

Nach Servicearbeiten ist bei Geräten der Schutzklasse II die Messung des Isolationswiderstandes und des Ableitstromes bei eingeschaltetem Gerät nach VDE 0701 / Teil 200 bzw. der am Aufstellort geltenden Vorschrift, durchzuführen!

Dieses Gerät entspricht der Schutzklasse II, erkennbar durch das Symbol .

● Messen des Isolationswiderstandes nach VDE 0701.

Isolationsmesser ($U_{\text{Test}} = 500 \text{ V}$) gleichzeitig an beiden Netzpolen und zwischen allen Gehäuse- oder Funktionsteilen (Antenne, Buchsen, Tasten, Zierteilen, Schrauben, usw.) aus Metall oder Metallegierungen anlegen. Fehlerfrei ist das Gerät bei einem:

$R_{\text{Isol}} \geq 2 \text{ M}$ bei $U_{\text{Test}} = 500 \text{ V}$
Meßzeit: 1 s (Fig. 1)

Anmerkung: Bei Geräten der Schutzklasse II kann durch Entladungswiderstände der Meßwert des Isolationswiderstandes konstruktionsbedingt $< 2 \text{ M}$ sein. In diesen Fällen ist die Ableitstrommessung maßgebend.

● Messen des Ableitstromes nach VDE 0701.

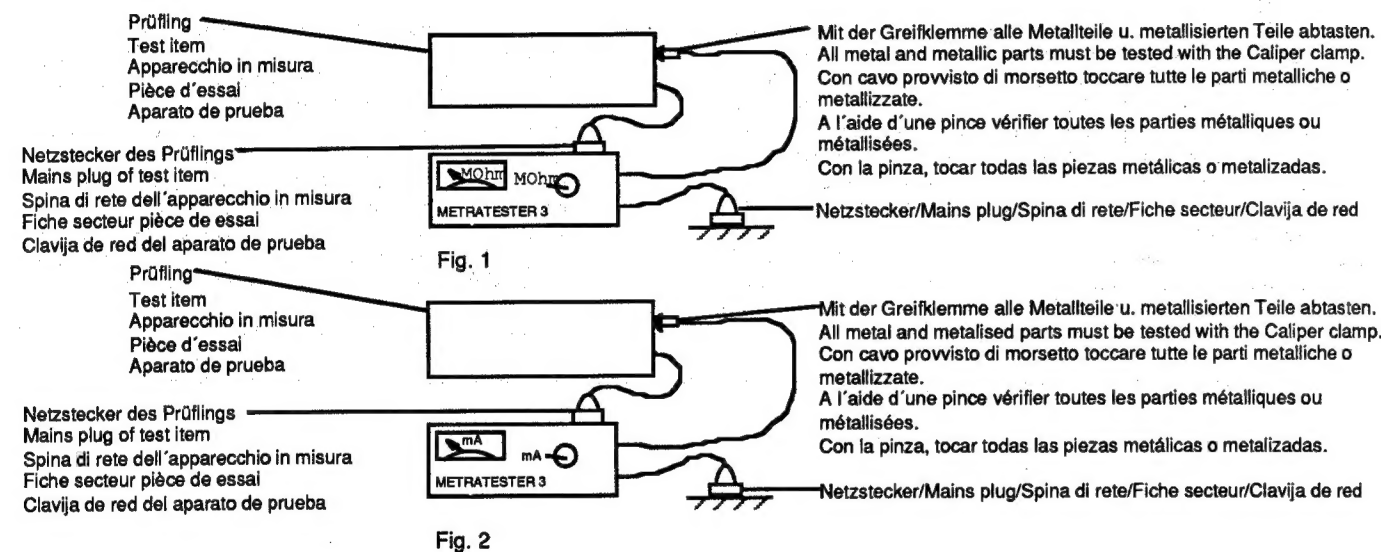
Ableitstrommesser ($U_{\text{Test}} = 220 \text{ V}$) gleichzeitig an beiden Netzpolen und zwischen allen Gehäuse- oder Funktionsteilen (Antenne, Buchsen, Tasten, Zierteilen, Schrauben, usw.) aus Metall oder Metallegierungen anlegen. Fehlerfrei ist das Gerät bei einem:

$I_{\text{Ableit}} \leq 1 \text{ mA}$ bei $U_{\text{Test}} = 220 \text{ V}$
Meßzeit: 1 s (Fig. 2)


● Wir empfehlen die Messungen mit dem METRATER 3 durchzuführen. (Meßgerät zur Prüfung elektrischer Geräte nach VDE 0701).

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Triebstr. 44
D 8000 München 50

- Ist die Sicherheit des Gerätes nicht gegeben, weil
 - eine Instandsetzung unmöglich ist
 - oder der Wunsch des Benutzers besteht, die Instandsetzung nicht durchführen zu lassen, so muß dem Betreiber die vom Gerät ausgehende Gefahr schriftlich mitgeteilt werden.



Empfehlungen für den Servicefall

- Nur Original - Ersatzteile verwenden.
Bei Bauteilen oder Baugruppen mit der Sicherheitskennzeichnung  sind Original - Ersatzteile zwingend notwendig.
- Auf Sollwert der Sicherungen achten.
- Zur Sicherheit beitragende Teile des Gerätes dürfen weder beschädigt noch offensichtlich ungeeignet sein.
- Dies gilt besonders für Isolierungen und Isolierteile.

- Netzleitungen und Anschlußleitungen sind auf äußere Mängel vor dem Anschluß zu prüfen. Isolation prüfen!
- Die Funktionssicherheit der Zugentlastung und von Biegeschutz-Tüllen ist zu prüfen.
- Thermisch belastete Lötstellen absaugen und neu löten.
- Belüftungen frei lassen.

Safety Standard Compliance

After service work on a product conforming to the Safety Class II, the insulating resistance and the leakage current with the product switch on must be checked according to VDE 0701 or to the specification valid at the installation location!

This product conforms to the Safety Class II, as identified by the symbol .

● Measurement of the Insulation Resistance to VDE 0701.

Connect an Insulation Meter ($U_{\text{Test}} = 500 \text{ V}$) to both mains poles simultaneously and between all cabinet or functional parts (antenna, sockets, buttons, decorative parts, etc.) made from metal or metal alloy. The product is fault free if:

$R_{\text{Isol}} \geq 2 \text{ M}$ at $U_{\text{Test}} = 500 \text{ V}$
Measuring time: 1s, (Fig. 1)

Comment: On product conforming to the Safety class II the Insulation Resistance can be $< 2 \text{ MOhm}$, dependent constructively on discharge resistors. In this cases, the check of the leakage current is significant.


● Measurement of the Leakage Current to VDE 0701.

Connect the Leakage Current Meter ($U_{\text{Test}} = 220 \text{ V}$) to both mains poles simultaneously and between all cabinet or functional parts (antenna, sockets, buttons, screws, etc.) mad from metal or metal alloy. The product is fault free if:

$I_{\text{Leak}} \leq 1 \text{ mA}$ at $U_{\text{Test}} = 220 \text{ V}$
Measuring time: 1 s, (Fig. 2)

Prescriptions de securite

Suite aux travaux de maintenance sur les appareils de la classe II, il convient de mesurer la résistance d'isolement et le courant de fuite sur l'appareil en état de marche, conformément à la norme VDE 0701 § 200, ou selon les prescriptions en vigueur sur le lieu de fonctionnement de l'appareil!

Cet appareil est conforme aux prescriptions de sécurité classe II, signalé par le symbole .

● Mesure de la résistance d'isolement selon VDE 0701

Brancher un appareil de mesure d'isolation ($U_{\text{test}} = 500 \text{ V}$) simultanément sur les deux pôles secteur et entre toutes les parties métalliques ou métallisées accessibles de l'appareil (antenne, embases, touches, enjoliveurs, vis, etc.).

Le fonctionnement est correct lorsque:

$R_{\text{Isol}} \geq 2 \text{ M}$ pour une $U_{\text{test}} : 500 \text{ V}$
Durée de la mesure: 1 s

Observations: L'isolation des appareils de la classe II, de part leur conception (résistance de décharge), peut être inférieure à $< 2 \text{ M}$, (Fig. 1).

● Mesure du courant de fuite selon VDE 0701

Brancher un ampèremètre du courant de fuite ($U_{\text{test}} = 220 \text{ V}$) simultanément sur les deux pôles du secteur et entre toutes les parties métalliques ou métallisées accessibles de l'appareil (antenne, embases, touches, enjoliveurs, vis, etc.). Le fonctionnement est correct lorsque (Fig. 2):


$I_{\text{fuite}} \leq 1 \text{ mA}$ pour $U_{\text{test}} : 200 \text{ V}$
Durée de la mesure: 1 s.

- We recommend that the measurements are carried out using the METRATER 3. (Test equipment for checking electrical products to VDE 0701).

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- If the safety of the product is not proved, because
 - a repair and restoration is impossible
 - or the request of the user is that the restoration is not to be carried out, the operator of the product must be warned of the danger by a written warning.

Recommendation for service repairs


- Use only original spare parts.
With components or assemblies accompanied with the Safety Symbol  only original-spare parts are strictly to be used.
- Use only original fuse value.
- Safety compliance, parts of the product must not be visually damaged or unsuitable. This is valid especially for insulators and insulating parts.
- Mains leads and connecting leads should be checked for external damage before connection. Check the insulation!
- The functional safety of the tension relief and bending protection bushes are to be checked:
- Thermally loaded solder pads are to be suck off and re-soldered.
- Ensure that the ventilation slots are not obstructed.

- Pour ces mesures, nous préconisons l'utilisation du METRATER 3 (instrument de mesure pour le contrôle d'appareils électriques conformes à la norme VDE 0701).

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- Dans le cas où la sécurité de l'appareil n'est pas assurée pour les raisons suivantes:
 - la remise en état est impossible
 - l'utilisateur ne souhaite pas la remise en état de l'appareil. l'utilisateur doit être informé par écrit du danger que représente l'utilisation de l'appareil.

Recommandations pour la maintenance

- Utiliser exclusivement des pièces de rechange d'origine. Les composants et ensembles de composants signalés par le symbole  doivent être impérativement remplacés par des pièces d'origine.
- Respecter la valeur nominale des fusibles.
- Veiller au bon état et la conformité des pièces contribuant à la sécurité de fonctionnement de l'appareil. Ceci s'applique particulièrement aux isollements et pièces isolantes.
- Vérifier le bon état extérieur des câbles secteur et des câbles de raccordement au point de vue isolement avant la mise sous tension.
- Vérifier le bon état des protections de gaine.
- Nettoyer les soudures avant de les renouveler.
- Dégager les voies d'aération.

I

Norme di sicurezza

Successivamente ai lavori di riparazione, negli apparecchi della classe di protezione II occorre effettuare la misura della resistenza di isolamento e della corrente di dispersione quando l'apparecchio è acceso, secondo le norme VDE 0701 / parte 200 e rispettivamente le norme locali.

Questo apparecchio corrisponde alla classe di protezione II ed è riconoscibile dal simbolo  M.

● Misura della resistenza di isolamento secondo VDE 0701

Applicare il misuratore di isolamento (tens. prova = 500 V-) contemporaneamente ai due poli di rete e tra tutte le parti del mobile e delle funzioni (antenna, prese, tasti, mascherine, viti ecc.) in metallo o in lega metallica. L'apparecchio non presenta difetti quando:

$R_{isol} \geq 2 \text{ M}$ con tens. prova = 500 V-

Tempo di misura: 1 s (Fig. 1).

Nota: Negli apparecchi della classe II, che per motivi costruttivi dispongono di resistenze di dispersione, il valore di misura della resistenza di isolamento può essere inferiore a $< 2 \text{ M}$.

In questi casi è determinante la misura della corrente di dispersione.

● Misura della corrente di dispersione secondo VDE 0701

Applicare il misuratore di isolamento (tens. prova = 220 V) contemporaneamente ai due poli di rete e tra tutte le parti del mobile e delle funzioni (antenna, prese, tasti, mascherine, viti ecc.) in metallo o in lega metallica. L'apparecchio non presenta difetti quando:


$I_{disp} \leq 1 \text{ mA}$ con tens. prova = 220 V

Tempo di misura: 1 s (Fig. 2)

E

DISPOSICIONES PARA LA SEGURIDAD

Después de operaciones de servicio en aparatos de la clase de protección II, se llevará a cabo la medida de la resistencia de aislamiento y de la corriente derivada, con el aparato conectado, de acuerdo con VDE 0701 o de las disposiciones vigentes en el lugar de instalación.

Este aparato corresponde a la clase de protección II, reconocible por el símbolo .

● Medida de la resistencia de aislamiento según VDE 0701.

Aplicar el medidor de aislamiento ($U_{prueba} = 500 \text{ V-}$), simultáneamente, a los dos polos de red y entre todas las partes del mueble o de funciones (antena, conectores, teclas, tornillos, etc.) de metal o aleaciones metálicas. El aparato estará libre de defectos con:

$R_{aisl} \geq 2 \text{ M}$ con $U_{prueba} = 500 \text{ V-}$

Tiempo de medida: 1 seg.

Observación: En aparatos de la clase de protección II, condicionado por la construcción y por resistencias de descarga, el valor de medida de la resistencia de aislamiento puede ser superior a $< 2 \text{ M}$.

En este caso es decisiva la medida de la corriente derivada (Fig.1).

● Medida de la corriente derivada de acuerdo con VDE 0701.

Aplicar el medidor de corriente derivada ($U_{prueba} = 220 \text{ V}$) simultáneamente a los dos polos de red y entre todas las partes del mueble o de funciones (antena, conectores, teclas, tornillos, etc.) de metal o aleaciones metálicas. El aparato estará libre de defectos con (Fig.2):

$I_{deriv} \leq 1 \text{ mA}$ con $U_{prueba} = 220 \text{ V}$.

Tiempo de medida: 1 seg.

- Si se recomienda de efectuar las medidas con el instrumento **METRATER 3** (instrumento de medida para el control de aparatos eléctricos según VDE 0701).

Metrawatt GmbH
Geschäftsstelle Bayern
Triebstr. 44
D 8000 München 50

- Si la seguridad del aparato no es alcanzada, porque:
 - una reparación no es posible
 - o es el deseo del cliente que una reparación no se realice, se ha de comunicar a quien lo haga funcionar, por escrito, del peligro dimanante del aparato.

Raccomandazione per il servizio assistenza

- Impiegare solo componenti originali:
 - △ I componenti o i gruppi di componenti contraddistinti dall'indicaz. devono assolutamente venir sostituiti con parti originali.
- Osservare il valore nominale dei fusibili.
- I componenti che concorrono alla sicurezza dell'apparecchio non possono essere né danneggiati né risultare visibilmente inadatti. Questo vale soprattutto per isolamenti e parti isolate.
- I cavi di rete e di collegamento vanno controllati prima dell'utilizzo affinché non presentino imperfezioni esteriori. Controllare l'isolamento.
- E' necessario controllare la sicurezza dei fermacavi e delle guaine flessibili.
- Saldature caricate termicam. vanno rifatte.
- Lasciare libere le fessure di areazione.

- Aconsejamos llevar a cabo las medidas con el **METRATER 3** (Instrumento de medida para la comprobación de aparatos eléctricos según VDE 0701).

Metrawatt GmbH
Geschäftsstelle Bayern
Triebstr. 44
D 8000 München 50


- Si no se cumple la seguridad del aparato, porque:
 - la puesta en orden es imposible, o
 - existe el deseo del usuario de no realizarla, se ha de comunicar a quien lo haga funcionar, por escrito, del peligro dimanante del aparato.


Recomendaciones para caso de servicio

- Emplear sólo componentes originales.
 - △ Con componentes o grupos constructivos con el indicativo de seguridad son de obligada necesidad piezas de repuesto originales.
- Las partes del aparato que contribuyan a la seguridad del mismo no deben estar deterioradas ni ser manifiestamente inadecuadas.
- Esto es especialmente válido para aislamientos o piezas aislantes.
- Los cables de red y de conexión se comprobarán, antes de conectarlos, en cuanto a defectos externos. Comprobar el aislamiento.
- Se ha de comprobar la función de seguridad de la compensación de tiro o de los manguitos de protección contra doblamientos.
- Repasar los puntos de soldadura sometidos a carga térmica.
- Mantener libres los canales de aireación.

USA
US &
Canada

Safety Instructions

 The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage", within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

 The exclamation mark within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

This product was designed and manufactured to meet strict quality and safety standards. There are, however, some installation and operation precautions which you should be particularly aware of.

- Read Instructions - All the safety and operating instructions should be read before the appliance is operated.
- Retain Instructions - The safety and operating instructions should be retained for future reference.
- Heed Warnings - All warnings on the appliance and in the operating instructions should be adhered to.
- Follow Instructions - All operating and use instructions should be followed.
- Water and Moisture - The appliance should not be used near water-for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, and the like.
- Wall or Ceiling Mounting - The appliance should be mounted to wall or ceiling only as recommended by the manufacturer.
- Ventilation - The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings; or, placed in a built-in installation, such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.
- Heat - The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.

- Power Sources - The appliance should be connected to a power supply only of the type given above or as marked on the appliance.
- Power-Cord Protection - Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.
- Cleaning - The appliance should be cleaned only as recommended by the manufacturer.
- Power Lines - An outdoor antenna should be located away from power lines.
- Outdoor Antenna Grounding - If an outside antenna is connected to the receiver, be sure the antenna system is grounded so as to provide some protection against voltage surges and built up static charges. Section 810 of the National Electrical Code, ANSI / NFPA No. 70-1984, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes and requirements for the grounding electrode.
- Nonuse Periods - The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.
- Object and Liquid Entry - Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.
- Damage Requiring Service - The appliance should be serviced by qualified service personnel when: The power-supply cord or the plug has been damaged; or objects have fallen or liquid has been spilled into the appliance; or the appliance has been exposed to rain; or the appliance does not appear to operate normally or exhibits a marked change in performance; or the appliance has been dropped, or the enclosure damaged; or the batteries have been damaged.
- Servicing - the user should not attempt to service the appliance beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.

Points x1 and x2 apply only to receivers or tuners.

Aktivieren des Testprogramms: Während dem Einschalten die Tasten MONO, TAPE und CD gedrückt halten.

Beenden des Testprogramms: Gerät ausschalten.

Starting the test program: Turn on the POWER switch while pressing the keys MONO, TAPE and CD.

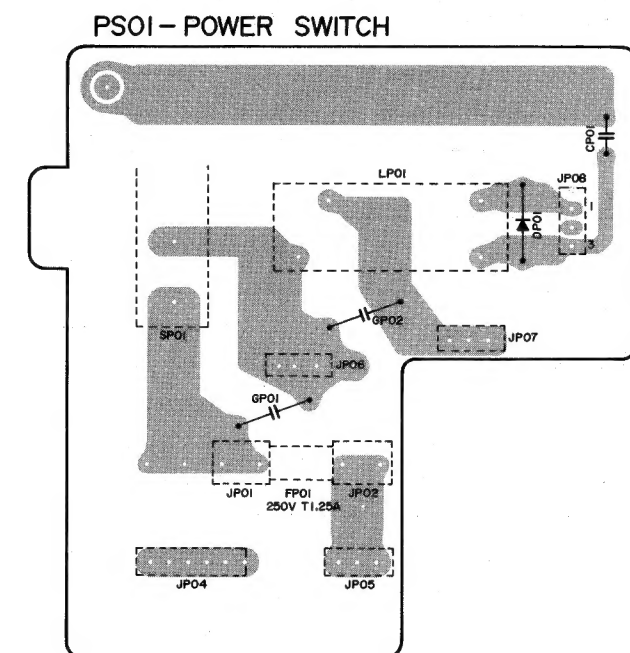
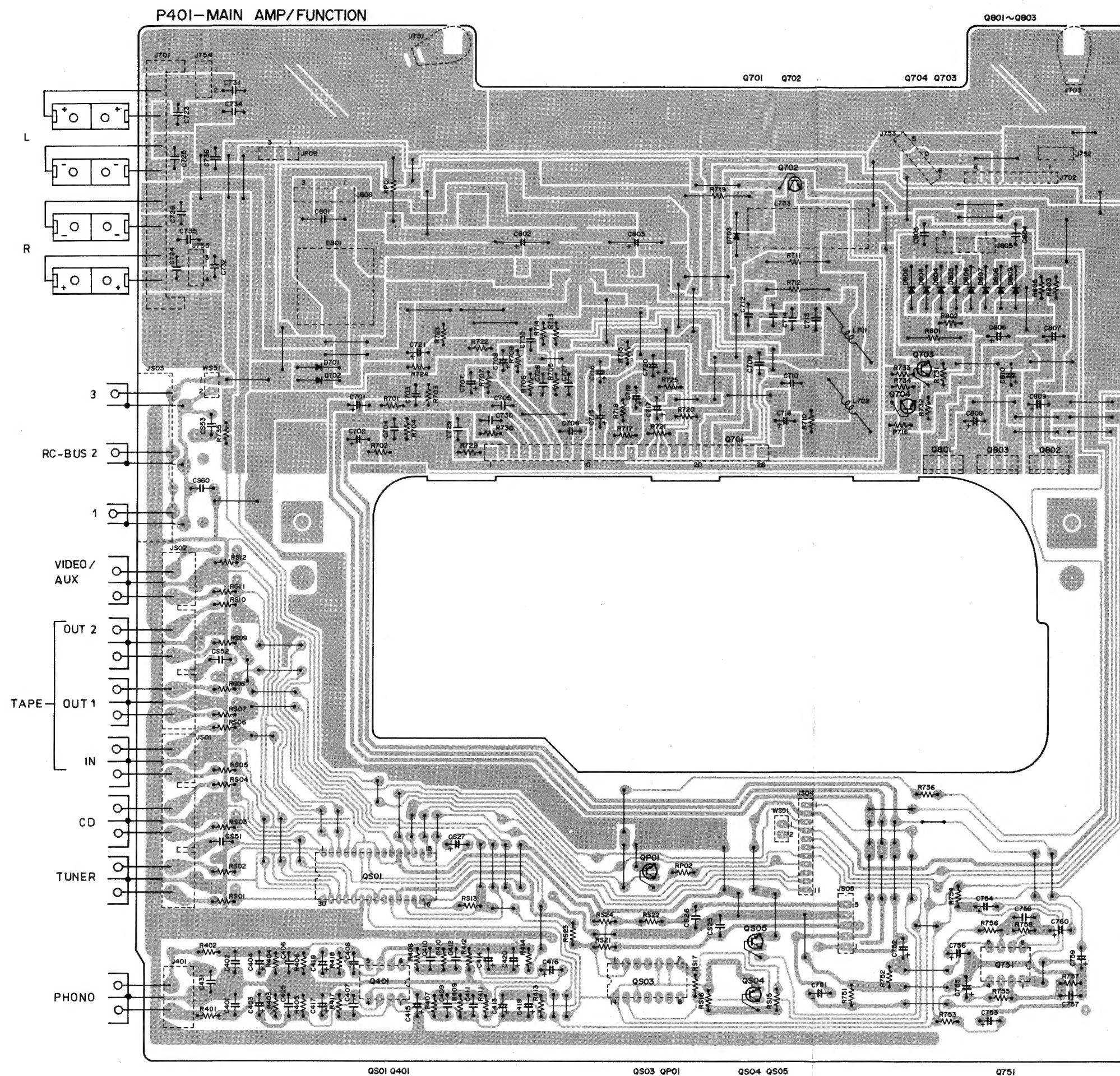
Ending the test program: Switch off the unit.

The diagram illustrates the interconnection of a stereo system with a microcomputer (μ-COM 4k). The components and their functions are as follows:

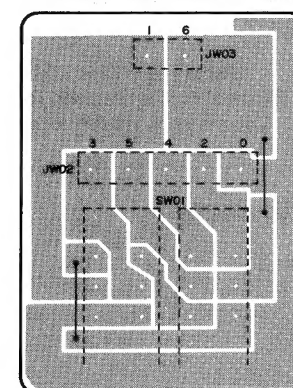
- PHONO AMP 4558DD**: Receives input from PHONO, TUNER, VIDEO/AUX, CD, and TAPE IN. Its output goes to the **AUDIO SELECTOR**.
- AUDIO SELECTOR (LC7821)**: Routes audio signals from the PHONO AMP and TAPE OUT to the **MONO SW** and the **20dB MUTE** block.
- MONO SW (4066)**: A switch controlled by the microcomputer (pin 1) that routes audio to either the **20dB MUTE** block or the **TAPE OUT**.
- 20dB MUTE**: A mute control block that receives signals from the microcomputer (pins 1 and 3) and the **AUDIO SELECTOR**. Its output goes to the **RC ONLY** block.
- RC ONLY**: A block that receives the muted audio signal and sends it to the **VR** (Volume Resistor) and the **BALANCE** control.
- VR** and **BALANCE**: Controls for volume and balance, respectively, which feed into the **POWER AMP STK4024**.
- POWER AMP STK4024**: Amplifies the audio signal and drives the **SPK SW** (Speaker Switch) and the **RELAY**.
- SPK SW** and **RELAY**: Controls for the **SYSTEM A** and **SYSTEM B** speakers, and the **HEAD PHONE** output.
- TAPE OUT**: A signal output from the **AUDIO SELECTOR** (pin 2) that goes to the **TAPE SOURCE FUNCTION** block.
- TAPE SOURCE FUNCTION**: A block that receives the **TAPE OUT** signal and sends it to the **μ-COM 4k** (pin 4).
- μ-COM 4k**: The central microcomputer, which controls the system via several pins:
 - Pin 1**: Controls the **MONO SW** and the **20dB MUTE**.
 - Pin 2**: Controls the **TAPE SOURCE FUNCTION**.
 - Pin 3**: Controls the **20dB MUTE**.
 - Pin 4**: Receives the **TAPE OUT** signal.
 - Pin 5**: Controls the **KEY SW**.
 - Pin 8**: Controls the **LED INDICATOR**.
- LED INDICATOR**: A block that provides visual feedback for the **PHONO**, **TUNER**, **CD**, **VIDEO/AUX**, **TAPE**, **MUTE**, **MONO**, and **STBY** states.
- KEY SW**: A switch that provides input to the microcomputer (pin 5) for **PHONO**, **TUNER**, **CD**, **TAPE**, **VIDEO/AUX**, and **MONO** functions.
- AC OUTLET RY**: A relay controlled by the microcomputer (pin 1) that connects the system to the **POWER SUPPLY**.
- POWER SUPPLY**: Provides power to the system.

Legend:

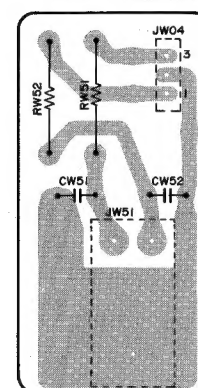
- *: TAPE SOURCE FUNCTION
- *: MECHANICAL SW



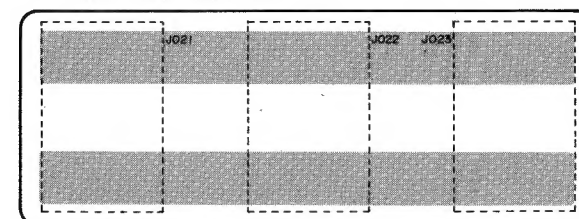
PW01-SPEAKER SWITCH

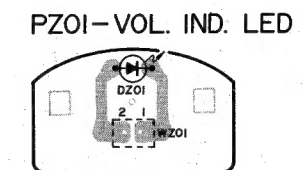
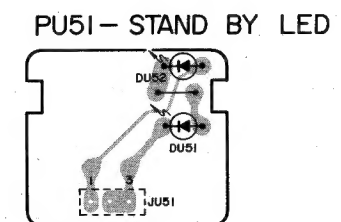
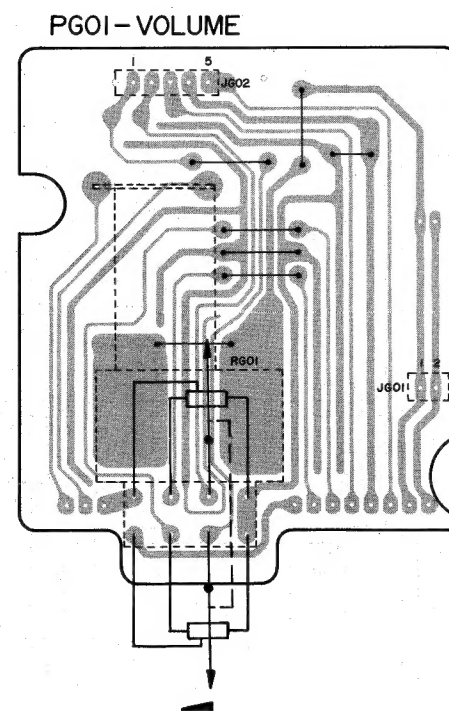
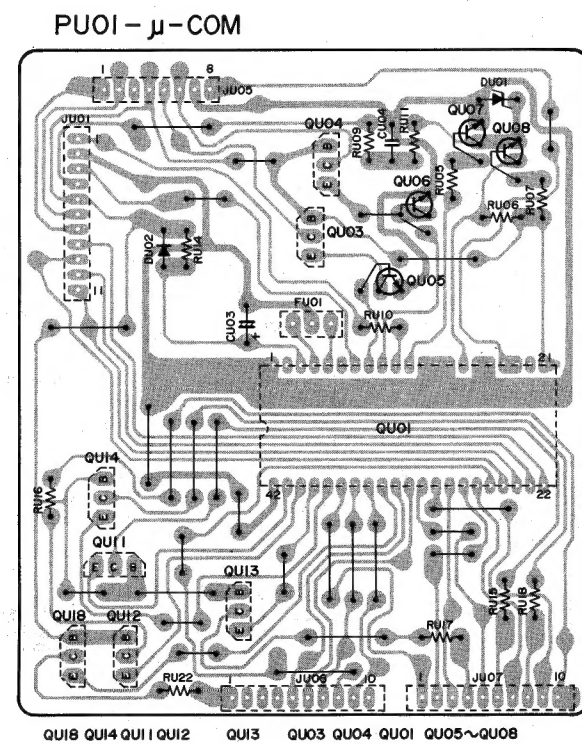
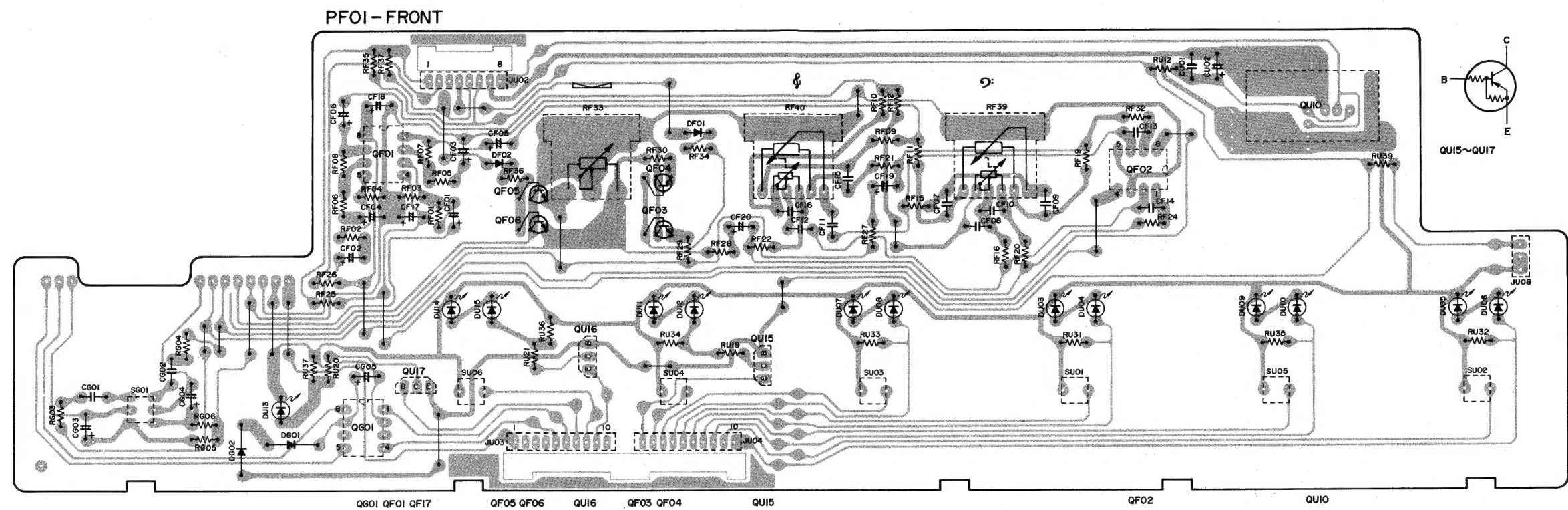


PW51-HEADPHONE

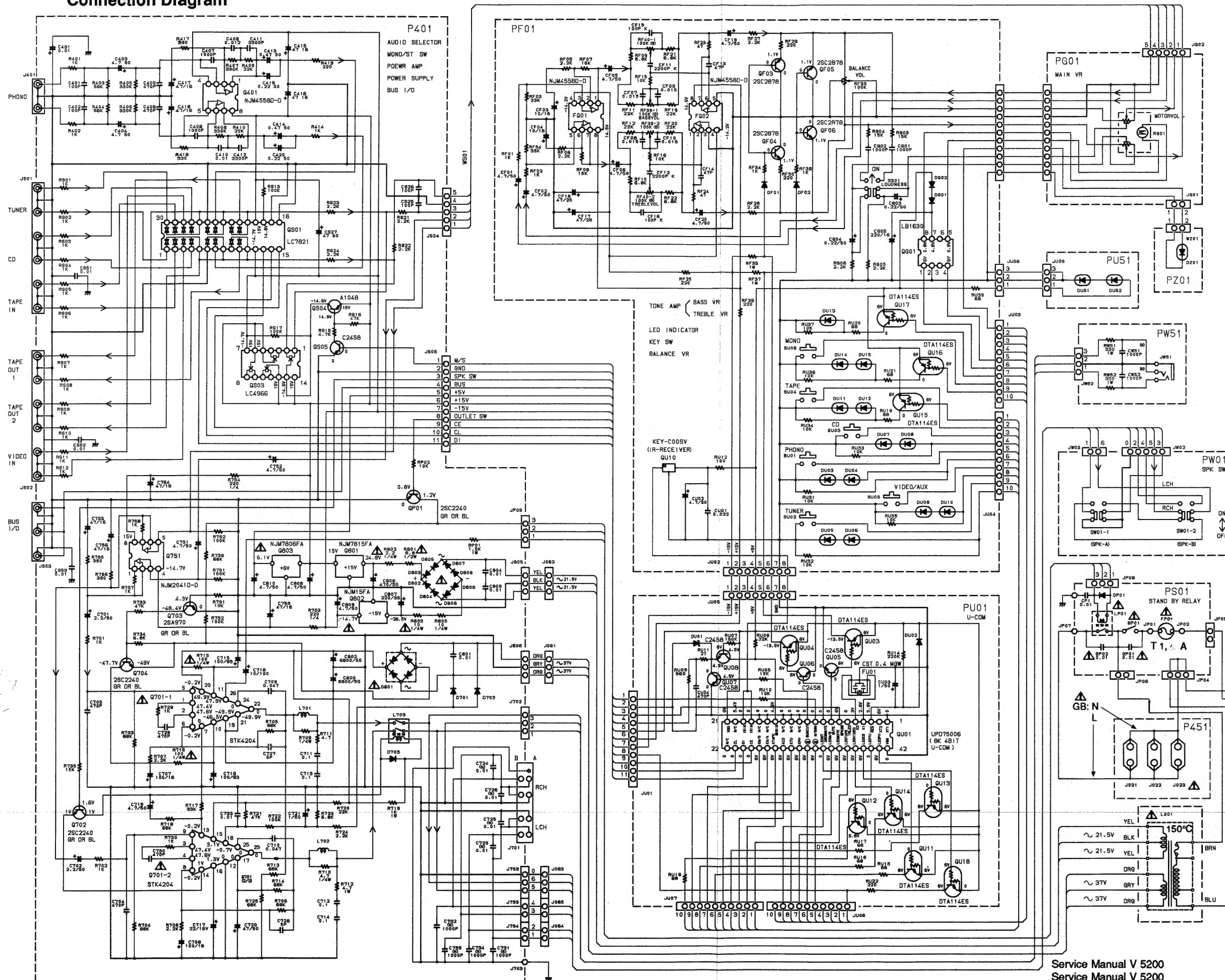


P451-AC OUTLET





Schaltbild Connection Diagram



DU01	5.6V ZENER
DU02	19S133 MA185
DU03 - DU15	LT3H8B YELLOW
DZ01	LT3H8B YELLOW
DU51 DU52	LT3D8B RED
D701 - D703	RL103E/DSF10C
D802 - D809	RL103E/DSF10C
DP01	RL103E/DSF10C
D801	S5VB20 6A200V
DF01 DF02	1SS176 MA165
	1SS254
QS04	A608SP A1048
	A1309 A933S
QS05 QU05 - QU08	C536SP C2458
	C3311 C1740S

22	N/C	VDD	21
	CL	N/C	
	DI	IRIN	
	CE	IRIN	
	KM/S	N/C	
	KM/A	N/C	
	KTAPE	BUSIN	
	KCD	N/C	
	KTU	N/C	
	KPH	N/C	
	M	BUSCUT	
	M	M/SSW	
	LEDST 20DBMUTE		
	LEDM/S	MUTE	
	LEDMUTE	SPKSW	
	LEDTAPE	IRLED	
	LEDVIDEO	X2	
	LEDCD	X1	
	LEDTU	RES	
	LEDPH	XT2	
42	VSS	XT1	1

blau/blue QU01
UPD75006
(8K 4BIT U-COM)

braun/brown

GRUNDIG

V 5200

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Service Manual V 5200
Instructions de Service V 5200
Manuale di servizio V 5200
Manual de Servicio V 5200

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